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DIVISION OF WATER
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FACT SHEET

KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT TO DISCHARGE TREATED WASTEWATER
INTO WATERS OF THE COMMONWEALTH

KPDES No.: KY0001643 **Permit Writer:** Sara Beard **Date:** August 6, 2009
AI No.: 28

1. **SYNOPSIS OF APPLICATION**

a. Name and Address of Applicant

Rare Breed Distilling LLC
1525 Tyrone Road
Lawrenceburg, Kentucky 40342

b. Facility Location

Rare Breed Distilling LLC, dba Wild Turkey Distillery
1525 Tyrone Road
Lawrenceburg, Anderson County, Kentucky

c. Description of Applicant's Operation

Rare Breed Distilling LLC, dba Wild Turkey Distillery manufactures, ages, and bottles distilled spirits (SIC Code 2085)

d. Production Capacity of Facility

Maximum 240 tons/day of grain processed.

e. Description of Existing Pollution Abatement Facilities

Outfall 001 – No treatment of non-contact cooling water and stormwater. After startup of new cooling tower, non-contact cooling water will no longer be discharged through Outfall 001.

Outfall 002 – Process and sanitary wastewaters are treated in a buffering pond and activated sludge treatment pond before flowing to the clarifiers, through a filtration system, and UV sterilization. After startup of new cooling tower, cooling tower blowdown, ESP discharge, and boiler blowdown will also be discharged through Outfall 002.

Outfall 003 – No treatment of stormwater runoff.

Outfall 004 – No treatment of stormwater runoff.

1. **SYNOPSIS OF APPLICATION – continued**

f. Permitting Action

Reissuance of a major KPDES permit for a facility that manufactures, ages, and bottles distilled spirits.

2. **RECEIVING WATERS**

a. Receiving Water Name

Outfalls 001 and 002 discharge to the Kentucky River at river mile index 84.0 and 83.5, respectively (coordinates 38°02′24″, 84°50′48″ and 38°02′45″, 84°51′12″, respectively).

Outfall 003 discharges to a sinkhole located on site (coordinates 38°02′18″, 84°51′05″).

Outfall 004 discharges to a highway drainage ditch (coordinates 38°02′13″, 84°50′59″).

b. Stream Segment Use Classifications

The Kentucky River, sinkhole, and highway ditch are classified as Warmwater Aquatic Habitat, Primary Contact Recreation, Secondary Contact Recreation, and Domestic Water Supply.

c. Stream Segment Antidegradation Categorization

The segment of the Kentucky River from mile point 53.5 to 118.2 is listed as impaired on the 2008 303(d) List of Waters for Kentucky. Impairments include nonsupport of fish comsumption. The pollutant of concern is methylmercury. Suspected sources are unknown.

The sinkhole and highway drainage ditch are categorized as High Quality Waters.

d. Stream Low Flow Condition

At the points of discharge, the 7Q10 and the Harmonic Mean for the Kentucky River are 32.4 and 518.3 cfs, respectively.

3. REPORTED DISCHARGE AND PROPOSED LIMITS

Description of Discharge - Outfall 001 - No treatment of non-contact cooling water and stormwater. After startup of new cooling tower, non-contact cooling water will no longer be discharged through Outfall 001.

Effluent Characteristics	Reported Discharge Monthly Average	Reported Discharge Daily Maximum	Proposed Limits Monthly Average	Proposed Limits Daily Maximum	Applicable Water Quality Criteria and/or Effluent Guidelines
Flow (MGD)	1.1	1.1	Report	Report	401 KAR 5:065, Section 2(8)
Temperature ^{o}F					
Tier 1	(92.6)	(92.6)	95	100	401 KAR 10:031, Section 4 401 KAR 5:080, Section 1(2)(c)2 401 KAR 10:029, Section 4
Tier 2			Removing from permit		401 KAR 5:080, Section 1(2)(c)2
Total Recoverable Iron (mg/l)	N/R	1.82	Removing from permit		401 KAR 5:080, Section 1(2)(c)2
Total Recoverable Manganese (mg/l)	N/R	0.072	Removing from permit		401 KAR 5:080, Section 1(2)(c)2
Total Suspended Solids (mg/l)					
Tier 1	37.2	37.2	30	45	401 KAR 10:031, Section 4 401 KAR 5:080, Section 1(2)(c)2
Tier 2			Report	Report	401 KAR 5:065, Section 2(8)
Oil & Grease (mg/l)	1.18	1.24	Report	Report	401 KAR 5:065, Section 2(8)
pH (Standard Units)	7.02(min)	8.50(max)	6.0(min)	9.0(max)	401 KAR 10:031, Section 4

Tier 1 – Limits are for current operation without addition of the new cooling tower.
Tier 2 - Limits are for current operation plus the addition of the new cooling tower.

The abbreviation N/R means Not Reported.

The data in the Reported Discharge columns were determined from an analysis of the Discharge Monitoring Reports (DMRs) for the previous permit.

4. METHODOLOGY USED IN DETERMINING LIMITATIONS

a. Serial Number

Outfall 001 - No treatment of non-contact cooling water and stormwater. After startup of new cooling tower, non-contact cooling water will no longer be discharged through Outfall 001.

b. Effluent Characteristics

Flow	Temperature
Total Recoverable Iron	Total Recoverable Manganese
Total Suspended Solids	Oil & Grease
pH	

c. Pertinent Factors

On September 8, 2004 Kentucky's revised water quality standards, 401 KAR 10:031 became effective.

Rare Breed Distilling LLC, dba Wild Turkey Distillery requested mixing zones for Temperature in the vicinity of the proposed discharge. After review of the outfall information submitted by the permittee the Division of Water has determined that a mixing zone will be granted for Temperature.

A summarization of the thermal mixing zone model can be found in Fact Sheet Attachment B - CORMIX Diffuser Model.

d. Monitoring Requirements

Flow shall be monitored instantaneously once per month (Tier 1) and instantaneously once per quarter with addition of the new cooling tower (Tier 2).

Temperature and pH shall be monitored once per month by grab sample (Tier 1). After addition of the new cooling tower (Tier 2), pH shall be monitored once per quarter by grab sample.

Total Suspended Solids and Oil & Grease shall be monitored once per quarter by grab sample.

4. METHODOLOGY USED IN DETERMINING LIMITATIONS - continued

e. Justification of Limits

The Kentucky Administrative Regulations (KARs) cited below have been duly promulgated pursuant to the requirements of Chapter 224 of the Kentucky Revised Statutes (KRSs).

Flow
The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(8)(a).

Temperature
Tier 1: The limits for parameter are consistent with the requirements of 401 KAR 10:031, Section 4, 401 KAR 10:029, Section 4, and 401 KAR 5:080, Section 1(2)(c)2.

Tier 2: The removal of the limit for Temperature from this permit is consistent with 401 KAR 5:080, Section 1(2)(c)2. Because non-contact cooling water will no longer be discharge through Outfall 001 after startup of the new cooling tower, it is the "Best Professional Judgement" (BPJ) of the Division of Water that this parameter be removed from the permit.

pH
The limits for this parameter is consistent with the requirements of 401 KAR 10:031, Section 4

Total Recoverable Iron and Total Recoverable Manganese
The removal of these parameters from the permit is consistent with the 401 KAR 5:080, Section 1(2)(c)2. A review of the DMR data for the previous permit indicated that reasonable potential did not exist for these parameters to be limited or monitored in the permit. Also, these parameters were originally placed on the permit to monitor runoff from a coal storage area that no longer exists. Therefore, it is the "Best Professional Judgement" (BPJ) of the Division of Water that these parameters be removed from the permit.

Total Suspended Solids
Tier 1: The limits for this parameter are consistent with the requirements of 401 KAR 10:031, Section 4 and 401 KAR 5:080, Section 1(2)(c)2. Section 4 of 10:031 establishes water quality criteria for the protection of Kentucky's waters. These limits are representative of the Division of Water’s “Best Professional Judgment” (BPJ) determination of the “Best Available Technology Economically Achievable” (BAT) requirements for this pollutant consistent with Section 1(2)(c) 2 of 401 KAR 5:080.

Tier 2: The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(8).

Oil & Grease
The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(8).

5. REPORTED DISCHARGE AND PROPOSED LIMITS

Description of Discharge - Outfall 002 - Process and sanitary wastewaters are treated in a buffering pond and activated sludge treatment pond before flowing to the clarifiers, through a filtration system, and UV sterilization. After startup of new cooling tower, cooling tower blowdown, ESP discharge, and boiler blowdown will also be discharged through Outfall 002.

Effluent Characteristics	Reported Discharge Monthly Average	Reported Discharge Daily Maximum	Proposed Limits Monthly Average	Proposed Limits Daily Maximum	Applicable Water Quality Criteria and/or Effluent Guidelines
Flow (MGD)	0.05	0.13	Report	Report	401 KAR 5:065, Section 2(8)
BOD_5 (lb/day)	53.7(mg/l)	118.4(mg/l)			401 KAR 10:031, Section 4
@ < 110 ton/day			29.4	71.5	401 KAR 5:045, Sections 3 and 5
@ 110-130 ton/day			34.5	84.3	401 KAR 5:080, Section 1(2)(c)2
@ 131-145 ton/day			38.5	93.9	
			30 mg/l*	45 mg/l*	
Total Suspended Solids (lb/day)	46.7(mg/l)	68.3(mg/l)			401 KAR 10:031, Section 4
@ < 110 ton/day			36.0	89.1	401 KAR 5:045, Sections 2 and 3
@ 110-130 ton/day			42.4	105.1	401 KAR 5:080, Section 1(2)(c)2
@ 131-145 ton/day			47.2	117.1	
			30 mg/l*	45 mg/l*	
Fecal Coliform Bacteria (N/100 ml)	40.5	546.6	Removing from permit		401 KAR 5:080, Section 1(2)(c)2
Escherichia Coli (N/100 ml)	NR	NR	130	240	401 KAR 10:031, Section 7 401 KAR 5:045, Section 4 401 KAR 5:080, Section 1(2)(c)2
Total Residual Chlorine (mg/l)	0.77	0.93	Removing from permit		401 KAR 5:080, Section 1(2)(c)2
Ammonia Nitrogen (as mg/l N)	6.26	10.05	20	30	401 KAR 10:031, Section 4 401 KAR 5:045, Sections 3 and 5
Dissolved Oxygen (mg/l) (minimum)	0.9		Not less than 2.0		401 KAR 10:031, Section 4
pH (standard units)	7.0	7.7	6.0(min)	9.0(max)	401 KAR 10:031, Section 4 401 KAR 5:045, Section 4

5. REPORTED DISCHARGE AND PROPOSED LIMITS - continued

Description of Discharge - Outfall 002 - Process and sanitary wastewaters are treated in a buffering pond and activated sludge treatment pond before flowing to the clarifiers, through a filtration system, and UV sterilization. After startup of new cooling tower, cooling tower blowdown, ESP discharge, and boiler blowdown will also be discharged through Outfall 002.

Effluent Characteristics	Reported Discharge		Proposed Limits		Applicable Water Quality Criteria and/or Effluent Guidelines
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	
Temperature ^{o}F					
Tier 1	NR	NR	NA	NA	
Tier 2			NA	89	401 KAR 10:031, Section 4(d)
Oil & Grease (mg/l)	NR	NR	Report	Report	401 KAR 5:065, Section 2(8)
Total Nitrogen (mg/l)	NR	NR	Report	Report	401 KAR 5:065, Section 2(8)
Total Phosphorus (mg/l)	NR	NR	Report	Report	401 KAR 5:065, Section 2(8)

Tier 1 – Limits are for current operation without addition of the new cooling tower.
Tier 2 - Limits are for current operation plus the addition of the new cooling tower.

The loading limits for BOD5 and Total Suspended Solids vary based on tons of grain processed per day.

The abbreviation BOD_5 means Biochemical Oxygen Demand (5-day).
The effluent limitations for *Escherichia Coli* are 30 day and 7 day Geometric Means.
The abbreviation NR means Not Reported.
The abbreviation NA means Not Applicable.

The data in the Reported Discharge columns were determined from an analysis of the Discharge Monitoring Reports (DMRs) for the previous permit.

*Apply only when sanitary wastewater makes up 100% of discharge

6. METHODOLOGY USED IN DETERMINING LIMITATIONS

a. Serial Number

Outfall 002 - Process and sanitary wastewaters are treated in a buffering pond and activated sludge treatment pond before flowing to the clarifiers, through a filtration system, and UV sterilization. After startup of new cooling tower, cooling tower blowdown, ESP discharge, and boiler blowdown will also be discharged through Outfall 002.

b. Effluent Characteristics

Flow	Biochemical Oxygen Demand (5-day)
Total Suspended Solids	Fecal Coliform
Escherichia Coli	Total Residual Chlorine
Ammonia Nitrogen	Dissolved Oxygen
pH	Temperature
Oil & Grease	Total Nitrogen
Total Phosphorus	

c. Pertinent Factors

This facility is an existing source discharger subject to the recommended effluent limitations of Subcategory A22 (Grain Distillers Operating Stillage Recovery Systems) of the Beverages Category of the Development Document for Effluent Limitation Guidelines and New Point Source Performance Standards for Miscellaneous Foods and Beverages Point Source Category published by the U.S, Environmental Protection Agency.

A summary of the effluent guidelines, water quality standards, assumptions, and calculations can be found in Attachment A - Fact Sheet Addendum for Rare Breed Distilling LLC, dba Wild Turkey Distillery.

Rare Breed Distilling plans to gradually increase their production based on an increase in projected sales.

d. Monitoring Requirements

Flow shall be monitored instantaneously once per week.

Biochemical Oxygen Demand (5-day) and Total Suspeded Solids shall be monitored once per week by 24 hour composite sample.

Escherichia Coli, Dissolved Oxygen, pH, Temperature, Oil & Grease, Total Nitrogen, and Total Phosphorus shall be monitored once per month by grab sample.

Ammonia Nitrogen shall be monitored once per month by composite sample.

e. Justification of Limits

The Kentucky Administrative Regulations (KARs) cited below have been duly promulgated pursuant to the requirements of Chapter 224 of the Kentucky Revised Statutes (KRSs).

Flow
The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(8)(a).

6. METHODOLOGY USED IN DETERMINING LIMITATIONS - continued

e. Justification of Limits - continued

BOD_5 and Total Suspended Solids
The limits for these parameters are consistent with the requirements of 401 KAR 10:031 Section 4(1); 401 KAR 5:045 Sections 2,3, and 5; and 401 KAR 5:080 Section 1(2)(c) 2. These limits are representative of the Division of Water's "Best Professional Judgment" (BPJ) determination of the "Best Available Technology Economically Achievable" (BAT) requirements for the combined distillery process and sanitary wastewaters.

Escherichia Coli and Fecal Coliform Bacteria
The limits for *Escherichia Coli* are consistent with the requirements of 401 KAR 10:031, Section 7, 401 KAR 5:045 Section 4 and 401 KAR 5:080, Section 1(2)(c) 2. The removal of Fecal Coliform Bacteria is consistent with the requirements of 401 KAR 5:080 Section 1(2)(c)2. Although Fecal Coliform Bacteria has been used as an indicator of fecal contamination, it does contain other species that are not necessarily fecal in origin. EPA recommends *Escherichia Coli*, which is specific to fecal material from warm-blooded animals, as the best indicator of health risk from contact with recreational waters. Therefore, it is the "Best Professional Judgment" (BPJ) of the Division of Water that *Escherichia Coli* replace Fecal Coliform Bacteria on this permit.

Ammonia Nitrogen and Dissolved Oxygen
The limits for these parameters are consistent with the requirements of 401 KAR 10:031, Section 4, and 401 KAR 5:045, Sections 3 and 5. Section 4 of 10:031 establishes water quality criteria for the protection of Kentucky's waters.

pH
The limits for these parameters are consistent with the requirements of 401 KAR 10:031, Section 4 and 5:045, Section 4. Section 4 of 10:031 establishes water quality criteria for the protection of Kentucky's waters. Section 4 of 5:045 establishes the acceptable levels of these parameters for biochemically degradable wastewaters.

Temperature
Tier 2: The limits for this parameters are consistent with the requirements of 401 KAR 10:031, Section 4.

Oil & Grease, Total Nitrogen, and Total Phosphorus
The monitoring requirements for these parameters are consistent with the requirements of 401 KAR 5:065, Section 2(8).

Total Residual Chlorine
The removal of this parameter from the permit is consistent with the 401 KAR 5:080, Section 1(2)(c)2. Because chlorine is not used for disinfections, it is the "Best Professional Judgment" (BPJ) of the Division of Water that this parameter be removed from the permit.

7. REPORTED DISCHARGE AND PROPOSED LIMITS

Description of Discharge - Outfall 003 – No treatment of stormwater runoff.

Effluent Characteristics	Reported Discharge Monthly Average	Reported Discharge Daily Maximum	Proposed Limits Monthly Average	Proposed Limits Daily Maximum	Applicable Water Quality Criteria and/or Effluent Guidelines
Flow (MGD)	0.083	0.083	Report	Report	401 KAR 5:065, Section 2(8)
BOD_5 (mg/l)	169	169	Report	Report	401 KAR 5:065, Section 2(8)
Total Suspended Solids (mg/l)	87.4	87.4	Report	Report	401 KAR 5:065, Section 2(8)
Oil & Grease (mg/l)	2.4	2.4	Report	Report	401 KAR 5:065, Section 2(8)
pH (Standard Units)	6.34 (min)	7.91 (max)	6.00 (min)	9.0 (max)	401 KAR 10:031, Section 4

The abbreviation BOD_5 means Biochemical Oxygen Demand (5-day).
The abbreviation N/R means Not Reported.
The abbreviation N/A means Not Applicable.

The data in the Reported Discharge columns was determined from an analysis of the Discharge Monitoring Reports (DMRs) for the previous permit.

8. METHODOLOGY USED IN DETERMINING LIMITATIONS

a. Serial Number

Outfall 003 – No treatment of stormwater runoff.

b. Effluent Characteristics

Flow	Biochemical Oxygen Demand (5-day)
Total Suspended Solids	Oil & Grease
pH	

c. Pertinent Factors

On September 8, 2004 Kentucky's revised water quality standards, 401 KAR 10:031 became effective.

d. Monitoring Requirements

Flow shall be monitored instantaneously once per quarter.

BOD_5, Total Suspeded Solids, Oil & Grease, and pH shall be monitored once per quarter by grab sample.

e. Justification of Limits

The Kentucky Administrative Regulations (KARs) cited below have been duly promulgated pursuant to the requirements of Chapter 224 of the Kentucky Revised Statutes (KRSs).

Flow, BOD_5, Total Suspended Solids, and Oil & Grease
The monitoring requirements for these parameters are consistent with the requirements of 401 KAR 5:065, Section 2(8).

pH
The limits for this parameter are consistent with the requirements of 401 KAR 10:031, Section 4.

9. REPORTED DISCHARGE AND PROPOSED LIMITS

Description of Discharge - Outfall 004 – No treatment of stormwater runoff.

Effluent Characteristics	Reported Discharge Monthly Average	Reported Discharge Daily Maximum	Proposed Limits Monthly Average	Proposed Limits Daily Maximum	Applicable Water Quality Criteria and/or Effluent Guidelines
Flow (MGD)	0.10	0.10	Report	Report	401 KAR 5:065, Section 2(8)
Total Suspended Solids (mg/l)	55.6	55.6	Report	Report	401 KAR 5:065, Section 2(8)
Oil & Grease (mg/l)	12.3	12.3	Report	Report	401 KAR 5:065, Section 2(8)
pH (Standard Units)	6.93 (min)	7.84 (max)	6.00 (min)	9.0 (max)	401 KAR 10:031, Section 4

The abbreviation N/R means Not Reported.
The abbreviation N/A means Not Applicable.

The data in the Reported Discharge columns was determined from an analysis of the Discharge Monitoring Reports (DMRs) for the previous permit.

10. METHODOLOGY USED IN DETERMINING LIMITATIONS

a. Serial Number

Outfall 004 – No treatment of stormwater runoff.

b. Effluent Characteristics

Flow	Total Suspended Solids
Oil & Grease	pH

c. Pertinent Factors

On September 8, 2004 Kentucky's revised water quality standards, 401 KAR 10:031 became effective.

d. Monitoring Requirements

Flow shall be monitored instantaneously once per quarter.

Total Suspeded Solids, Oil & Grease, and pH shall be monitored once per quarter by grab sample.

e. Justification of Limits

The Kentucky Administrative Regulations (KARs) cited below have been duly promulgated pursuant to the requirements of Chapter 224 of the Kentucky Revised Statutes (KRSs).

Flow, Total Suspended Solids, and Oil & Grease
The monitoring requirements for these parameters are consistent with the requirements of 401 KAR 5:065, Section 2(8).

pH
The limits for this parameter are consistent with the requirements of 401 KAR 10:031, Section 4.

11. ANTIDEGRADATION

The conditions of 401 KAR 10:029, Section 1 have been satisfied by this permit action. This permit action involves the reissuance of a permit with a proposed expanded discharge. This proposed expanded discharge is to "impaired waters". Therefore, a review under 401 KAR 10:030 Section 1 is not applicable.

12. PROPOSED COMPLIANCE SCHEDULE FOR ATTAINING EFFLUENT LIMITATIONS

Permittee shall comply with the effluent limitations by the effective date of the permit.

13. PROPOSED SPECIAL CONDITIONS WHICH WILL HAVE A SIGNIFICANT IMPACT ON THE DISCHARGE

Best Management Practices (BMP) Plan
Pursuant to 401 KAR 5:065, Section 2(10), a BMP requirement shall be included: to control or abate the discharge of pollutants from ancillary areas containing toxic or hazardous substances or those substances which could result in an environmental emergency; where numeric effluent limitations are infeasible; or to carry out the purposes and intent of KRS 224. The facility has several areas where support activities occur which have a potential of the discharge of such substances through storm water runoff or spillage. Some of these areas will drain to present wastewater treatment plants, others will not.

Cooling Water Additives, FIFRA, and Mollusk Control
The discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) in cooling water which ultimately may be released to the waters of the Commonwealth is prohibited, except Herbicides, unless specifically identified and authorized by the KPDES permit. In the event the permittee needs to use a biocide or chemical not previously reported for mollusk control or other purpose, the permittee shall submit sufficient information, a minimum of thirty (30) days prior to the commencement of use of said biocides or chemicals, to the Division of Water for review and establishment of appropriate control parameters. Such information requirements shall include:

1. Name and general composition of biocide or chemical,
2. Any and all aquatic organism toxicity data,
3. Quantities to be used,
4. Frequencies of use,
5. Proposed discharge concentrations, and
6. EPA registration number, if applicable.

Mixing Zone
Rare Breed Distilling LLC, dba Wild Turkey Distillery has requested a mixing zone in the vicinity of the proposed discharge for Temperature. Pursuant to the requirements of 401 KAR 10:029, Section 4(6) an assigned mixing zone can not exceed 1/3 of the width of the receiving water body in a spatial direction. At the proposed point of discharge the width of the Kentucky River is 334 feet therefore an assigned mixing zone for these pollutants can not exceed 111 feet in a spatial direction. In accordance with the requirements of 401 KAR 10:029, Section 4 (1) the mixing zone for Temperature shall have the following dimensions:

Linear Distance from Point of Discharge:	0.49 feet in any direction
Maximum Surface Area Involved:	0.19 square feet
Volume of Receiving Water	3.24 cfs (2.09 MGD)

14. PERMIT DURATION

Five (5) years. This facility is in the Kentucky River Basin Management Unit as per the Kentucky Watershed Management Framework.

15. PERMIT INFORMATION

The application, draft permit fact sheet, public notice, comments received, and additional information is available by writing the Division of Water at 200 Fair Oaks Lane, Frankfort, Kentucky 40601.

16. REFERENCES AND CITED DOCUMENTS

All material and documents referenced or cited in this fact sheet are a part of the permit information as described above and are readily available at the Division of Water Central Office. Information regarding these materials may be obtained from the person listed below.

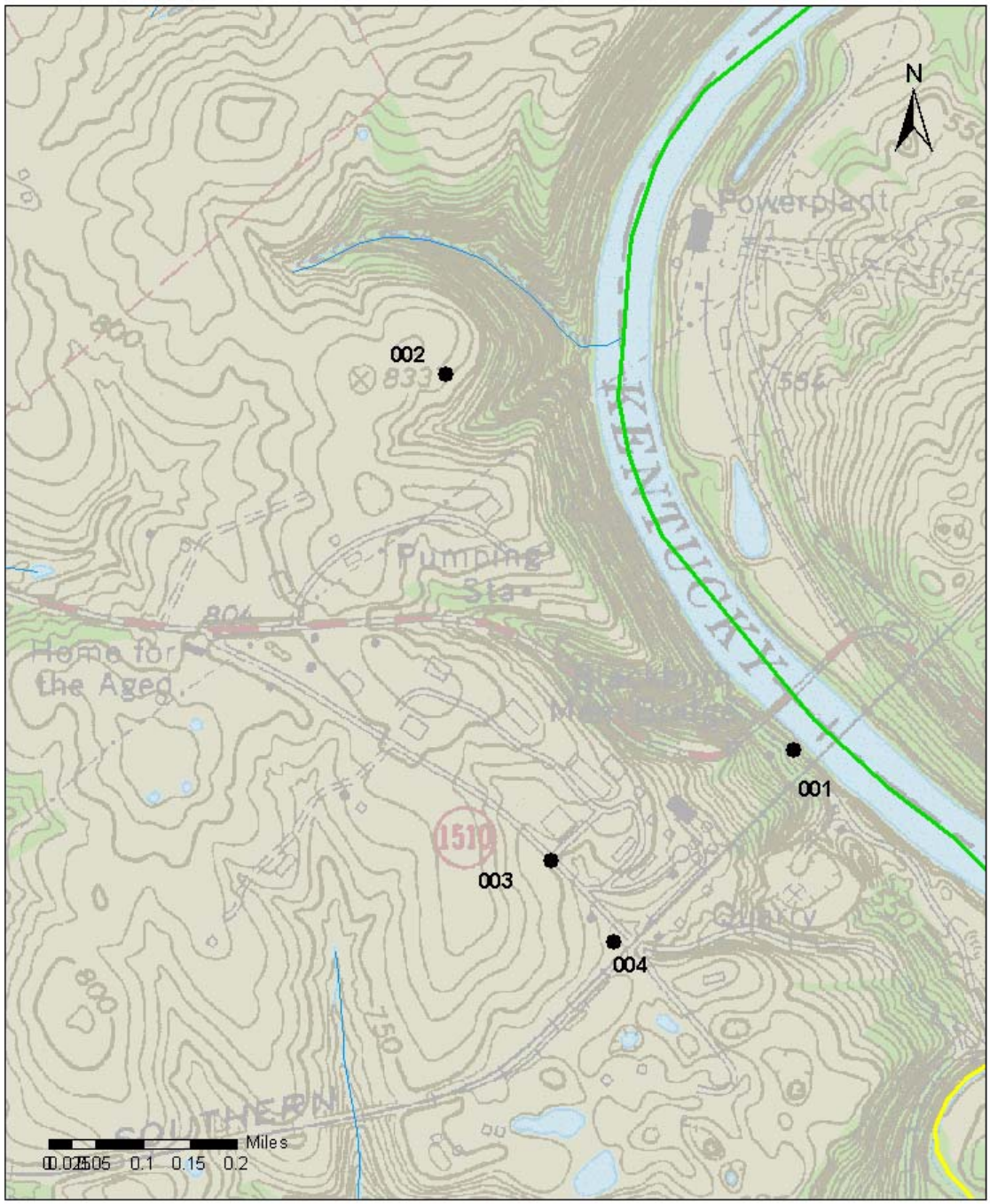
17. CONTACT

For further information contact the individual identified on the Public Notice or the Permit Writer - Sara Beard at (502) 564-3410, extension 4925 or e-mail Sara.Beard@ky.gov.

18. PUBLIC NOTICE INFORMATION

Please refer to the attached Public Notice for details regarding the procedures for a final permit decision, deadline for comments, and other information required by 401 KAR 5:075, Section 4(2)(e).

SITE MAP


N
002
001
003
004
Powerplant
Pumping Sta.
Home for the Aged
KENTUCKY
Quarry
1510
Miles
0 0.025 0.05 0.1 0.15 0.2

REGULATORY REQUIREMENTS - EFFLUENT GUIDELINES

This facility is an existing source discharger subject to the recommended effluent limitations of Subcategory A22 (Grain Distillers Operating Stillage Recovery Systems) of the Beverages Category of the Development Document for Effluent Limitation Guidelines and New Point Source Performance Standards for Miscellaneous Foods and Beverages Point Source Category published by the U.S, Environmental Protection Agency.

MISCELANEOUS FOODS AND BEVERAGES POINT SOURCE

Beverages Category

Subcategory A22 - Grain Distillers Operating Stillage Recovery Systems

Applicability; description of the Beverages Category

The recommendations of this category are applicable to discharges from establishments primarily engaged in manufacturing alcoholic liquors by distillation and rectification, and in manufacturing cordials, and alcoholic cocktails by blending processes or by mixing liquors and other ingreients.

Effluent Characteristic	Maximum for Any 1 Day	Average of daily values for 30 consecutive days
	Kg per 1000 Kg of product	
BOD_5	0.32	0.13
Total Suspended Solids	0.40	0.16

LIMITS CALCULATIONS – EFFLUENT GUIDELINES

The final effluent limitations required by the effluent guidelines are a summation of the component contributions:

$$\text{Monthly Average} = \sum \text{Production Rate} \times 2.0 \times \text{Average Factor}$$

$$\text{Daily Maximum} = \sum \text{Production Rate} \times 2.0 \times \text{Maximum Factor}$$

Where: Production Rate is in tons/day
2.0 is the conversion factor from kg/kkg to lbs/ton
Average Factor is the Average of daily values for 30 consecutive days
Maximum Factor is the Maximum for Any 1 Day

Effluent Guidelines - Outfall 002			
Pollutant or Pollutant Property	Production Rate (tons grain/day)	Daily Maximum (lbs/day)	Monthly Average (lbs/day)
BOD_5	< 110	70.4	28.6
	110 – 130	83.2	33.8
	131 – 145	92.8	37.7
Total Suspended Solids	< 110	88.0	35.2
	110 – 130	104.0	41.6
	131 – 145	116.0	46.4

REGULATORY REQUIREMENTS – SANITARY WASTEWATER SECONDARY TREATMENT STANDARDS

401 KAR 5:045

Pollutant or Pollutant Property	Maximum for Any 1 Day	Average of daily values for 30 consecutive days
BOD_5	45 mg/l	30 mg/l
Total Suspended Solids	45 mg/l	30 mg/l

LIMITS CALCULATIONS – REGULATORY REQUIREMENTS – SANITARY WASTEWATER SECONDARY TREATMENT STANDARDS

Monthly Average = Design Flow x 8.345 x Secondary Treatment Monthly Average

Daily Maximum = Design Flow x 8.345 x Secondary Treatment Daily Maximum

Where: Design Flow is the design flow of the wastewater treatment plant in MGD
8.345 is a conversion factor

Sanitary Wastewater – Outfall 001			
Pollutant or Pollutant Property	**Design Flow (MGD)**	**Daily Maximum (lbs/day)**	**Monthly Average (lbs/day)**
BOD_5	0.003	1.13	0.75
Total Suspended Solids	0.003	1.13	0.75

Total Limits

Effluent - Outfall 002			
Pollutant or Pollutant Property	**Production Rate (tons grain/day)**	**Daily Maximum (lbs/day)**	**Monthly Average (lbs/day)**
BOD_5	< 110	71.5	29.4
	110 – 130	84.3	34.5
	131 – 145	93.9	38.5
Total Suspended Solids	< 110	89.1	36.0
	110 – 130	105.1	42.4
	131 – 145	117.1	47.2

CORMIX2 PREDICTION FILE:

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------------------------------------------------------------------------------
                        CORMIX MIXING ZONE EXPERT SYSTEM
          Subsystem CORMIX2:  Multiport Diffuser Discharges
                              CORMIX Version 5.0GT
                          HYDRO2 Version 5.0.0.0 March 2007
------------------------------------------------------------------------------

CASE DESCRIPTION
 Site name/label:   Wild Turkey KY0001643
 Design case:       Outfall 001 - Temperature
 FILE NAME:         C:\...ram Files\CORMIX 5.0_TEST\MyFiles\Wild Turkey.prd
 Time stamp:        Tue Jul  7 14:57:32 2009

ENVIRONMENT PARAMETERS (metric units)
 Bounded section
 BS    =    101.80  AS    =    527.50  QA    =     14.67  ICHREG= 2
 HA    =      5.18  HD    =      3.99
 UA    =     0.028  F     =     0.056 USTAR =0.2317E-02
 UW    =     2.000 UWSTAR=0.2198E-02
 Uniform density environment
 STRCND=  U         RHOAM =  999.3403

DISCHARGE PARAMETERS (metric units)
 BANK  =  LEFT      DISTB =      0.00  Configuration: flush_discharge
 SIGMA =     90.00  HDO   =      0.91  SLOPE =   30.00 deg.
 Rectangular channel geometry:
 B0    =     0.509 H0    =     0.076 A0    =0.3879E-01  AR    =      0.150
 U0    =     1.243 Q0    =     0.048       =0.4819E-01
 RHO0  =  993.0346  DRHO0 =0.6306E+01  GP0   =0.6188E-01
 C0    =0.2450E+02  CUNITS=  deg.C
 IPOLL =  3         KS    =0.2388E-05  KD    =0.0000E+00

FLUX VARIABLES (metric units)
 Q0    =0.4819E-01  M0    =0.5988E-01  J0    =0.2982E-02
 Associated length scales (meters)
 LQ    =     0.20  LM    =      2.22  Lm    =      8.80  Lb    =    138.70

NON-DIMENSIONAL PARAMETERS
 FR0   =     11.26  FRCH  =     18.09  R     =     44.68

FLOW CLASSIFICATION
 3333333333333333333333333333333333333333
 3  Flow class (CORMIX3)      =    FJ1    3
 3  Applicable layer depth HS =     3.99  3
 3333333333333333333333333333333333333333

MIXING ZONE / TOXIC DILUTION / REGION OF INTEREST PARAMETERS
 C0    =0.2450E+02  CUNITS=  deg.C
 NTOX  =  0
 NSTD  =  1         CSTD  =0.7200E+01
 REGMZ =  0
 XINT  =   3440.00  XMAX  =   3440.00

X-Y-Z COORDINATE SYSTEM:
    ORIGIN is located at the WATER SURFACE and at center of discharge
      channel/outlet:      0.00 m  from the LEFT  bank/shore.
    X-axis points downstream
    Y-axis points to left as seen by an observer looking downstream
    Z-axis points vertically upward (in CORMIX3, all values Z = 0.00)
```

NSTEP = 50 display intervals per module

CORMIX2 PREDICTION FILE - continued

```
NOTE on dilution/concentration values for this HEATED DISCHARGE (IPOLL=3):
   S  = hydrodynamic dilutions, include buoyancy (heat) loss effects
   C  = corresponding temperature values (always in "degC"!),
        include heat loss
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
BEGIN MOD301: DISCHARGE MODULE

 Efflux conditions:
       X        Y       Z        S       C       BV       BH
    0.00     0.00    0.00     1.0 0.245E+02   0.08     0.25

END OF MOD301: DISCHARGE MODULE
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
BEGIN MOD302: ZONE OF FLOW ESTABLISHMENT

  Control volume inflow:
       X        Y       Z        S       C       BV       BH
    0.00     0.00    0.00     1.0 0.245E+02   0.08     0.25

 Profile definitions:
   BV = Gaussian 1/e (37%) vertical thickness
   BH = Gaussian 1/e (37%) horizontal half-width, normal to trajectory
   S = hydrodynamic centerline dilution
   C = centerline concentration (includes reaction effects, if any)

  Control volume outflow:                              SIGMAE=    270.14
       X        Y       Z        S       C       BV       BH
    0.00    -0.91    0.00     1.0 0.245E+02   0.11     0.30
 Cumulative travel time =          0.7322 sec

END OF MOD302: ZONE OF FLOW ESTABLISHMENT
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
BEGIN CORSURF (MOD310): BUOYANT SURFACE JET - NEAR-FIELD REGION

 Surface jet in deep crossflow with strong buoyancy effects.

 Profile definitions:
   BV = Gaussian 1/e (37%) vertical thickness
   BH = Gaussian 1/e (37%) horizontal half-width, normal to trajectory
   S = hydrodynamic centerline dilution
   C = centerline concentration (includes reaction effects, if any)

       X        Y       Z        S       C       BV       BH
    0.00    -0.91    0.00     1.0 0.245E+02   0.11     0.30
    0.08    -2.73    0.00     2.5 0.972E+01   0.28     0.75
** WATER QUALITY STANDARD OR CCC HAS BEEN FOUND **
 The pollutant concentration in the plume falls below water quality standard
   or CCC value of 0.720E+01 in the current prediction interval.
 This is the spatial extent of concentrations exceeding the water quality
   standard or CCC value.
    0.19    -4.21    0.00     3.7 0.654E+01   0.39     1.10
    0.34    -5.68    0.00     5.0 0.495E+01   0.46     1.52
    0.58    -7.33    0.00     6.1 0.400E+01   0.49     2.06
.
.
.
```

CORMIX2 PREDICTION FILE - continued

```
     33.49   -65.59    0.00    24.8 0.988E+00   0.39    32.85
     34.49   -66.68    0.00    25.0 0.979E+00   0.39    33.52
     35.51   -67.76    0.00    25.2 0.971E+00   0.39    34.18
  Jet/plume APPROACHES OPPOSITE BANK at above position.
  Flow continues as WALL JET/PLUME.
     35.51  -101.80    0.00    25.2 0.973E+00   0.46    68.36
 Buoyant jet regime ends with local CRITICAL CONDITIONS.
 Cumulative travel time =        1109.8555 sec

END OF CORSURF (MOD310): BUOYANT SURFACE JET - NEAR-FIELD REGION
-------------------------------------------------------------------------------
 Bank nearest to plume centerline has changed.
   Nearest bank is now on RIGHT.
-------------------------------------------------------------------------------
** End of NEAR-FIELD REGION (NFR) **
-------------------------------------------------------------------------------

 The initial plume WIDTH/THICKNESS VALUE in the next far-field module will be
  CORRECTED by a factor  1.17 to conserve the mass flux in the far-field!

 Some bank/shore interaction occurs at end of near-field.

 In the next prediction module, the jet/plume centerline will be set
   to follow the bank/shore.
-------------------------------------------------------------------------------
BEGIN MOD341: BUOYANT AMBIENT SPREADING

 Plume is ATTACHED to RIGHT bank/shore.
   Plume width is now determined from RIGHT bank/shore.

 Profile definitions:
   BV = top-hat thickness,measured vertically
   BH = top-hat half-width, measured horizontally from bank/shoreline
   S  = hydrodynamic average (bulk) dilution
   C  = average (bulk) concentration (includes reaction effects, if any)

 Plume Stage 2 (bank attached):
       X        Y       Z        S        C        BV       BH
     35.51  -101.80    0.00    25.2 0.973E+00   0.54    80.13
     35.61  -101.80    0.00    25.2 0.971E+00   0.54    80.60
     35.72  -101.80    0.00    25.3 0.970E+00   0.54    81.06
.
.
.
     40.57  -101.80    0.00    26.7 0.916E+00   0.46   101.02
     40.68  -101.80    0.00    26.8 0.915E+00   0.46   101.43
     40.78  -101.80    0.00    26.8 0.914E+00   0.45   101.80
 Cumulative travel time =        1298.9301 sec
 Plume is LATERALLY FULLY MIXED at the end of the buoyant spreading regime.

END OF MOD341: BUOYANT AMBIENT SPREADING
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
BEGIN MOD361: PASSIVE AMBIENT MIXING IN UNIFORM AMBIENT

  Vertical diffusivity (initial value)   = 0.295E-02 m^2/s
  Horizontal diffusivity (initial value) = 0.738E-02 m^2/s
```

CORMIX2 PREDICTION FILE – continued

```
 Profile definitions:
   BV = Gaussian s.d.*sqrt(pi/2) (46%) thickness, measured vertically
      = or equal to water depth, if fully mixed
   BH = Gaussian s.d.*sqrt(pi/2) (46%) half-width,
        measured horizontally in Y-direction
   S = hydrodynamic centerline dilution
   C = centerline concentration (includes reaction effects, if any)

 Plume Stage 2 (bank attached):
       X        Y       Z        S       C       BV      BH
    40.78  -101.80    0.00    26.8 0.914E+00   0.45   101.80
   108.77  -101.80    0.00    26.8 0.913E+00   0.45   101.80
   176.75  -101.80    0.00    26.8 0.912E+00   0.45   101.80
.
.
.
  3304.03  -101.80    0.00    26.8 0.866E+00   0.45   101.80
  3372.02  -101.80    0.00    26.8 0.865E+00   0.45   101.80
  3440.00  -101.80    0.00    26.8 0.864E+00   0.45   101.80
 Cumulative travel time =      123143.1875 sec

 Simulation limit based on maximum specified distance =   3440.00 m.
   This is the REGION OF INTEREST limitation.

END OF MOD361: PASSIVE AMBIENT MIXING IN UNIFORM AMBIENT
------------------------------------------------------------------------------
------------------------------------------------------------------------------
CORMIX3: Buoyant Surface Discharges                  End of Prediction File
```

CORMIX SESSION REPORT:

```
------------------------------------------------------------------------------
                     CORMIX MIXING ZONE EXPERT SYSTEM
                         CORMIX Version 5.0GT
                      HYDRO3:Version  March,2007
SITE NAME/LABEL:                Wild Turkey KY0001643
  DESIGN CASE:                  Outfall 001 - Temperature
  FILE NAME:                    C:\Program Files\CORMIX 5.0 TEST\MyFiles\Wild
Turkey.prd
  Using subsystem CORMIX3:     Buoyant Surface Discharges
  Start of session:             07/07/2009--14:57:32
------------------------------------------------------------------------------
SUMMARY OF INPUT DATA:
------------------------------------------------------------------------------
AMBIENT PARAMETERS:
  Cross-section                          = bounded
  Width                          BS      = 101.80 m
  Channel regularity             ICHREG  = 2
  Ambient flowrate               QA      = 14.67 m^3/s
  Average depth                  HA      = 5.18 m
  Depth at discharge             HD      = 3.99 m
  Ambient velocity               UA      = 0.0278 m/s
  Darcy-Weisbach friction factor F       = 0.0556
    Calculated from Manning's n          = 0.035
  Wind velocity                  UW      = 2 m/s
  Stratification Type            STRCND  = U
  Surface temperature                    = 13.30 degC
  Bottom temperature                     = 13.30 degC
  Calculated FRESH-WATER DENSITY values:
  Surface density                RHOAS   = 999.3403 kg/m^3
  Bottom density                 RHOAB   = 999.3403 kg/m^3
------------------------------------------------------------------------------
DISCHARGE PARAMETERS:            Surface Discharge
  Discharge located on                   = left bank/shoreline
  Discharge configuration                = flush discharge
  Distance from bank to outlet   DISTB   = 0 m
  Discharge angle                SIGMA   = 90 deg
  Depth near discharge outlet    HD0     = 0.91 m
  Bottom slope at discharge      SLOPE   = 30 deg
  Rectangular discharge:
    Discharge cross-section area A0      = 0.038787 m^2
    Discharge channel width      B0      = 0.509016 m
    Discharge channel depth      H0      = 0.0762 m
    Discharge aspect ratio       AR      = 0.149701
  Discharge flowrate             Q0      = 0.048194 m^3/s
  Discharge velocity             U0      = 1.24 m/s
  Discharge temperature (freshwater)     = 37.80 degC
  Corresponding density          RHO0    = 993.0346 kg/m^3
  Density difference             DRHO    = 6.3057 kg/m^3
  Buoyant acceleration           GP0     = 0.0619 m/s^2
  Discharge concentration        C0      = 24.5 deg.C
  Surface heat exchange coeff.   KS      = 0.000002 m/s
  Coefficient of decay           KD      = 0 /s
------------------------------------------------------------------------------
DISCHARGE/ENVIRONMENT LENGTH SCALES:
  LQ  = 0.20 m         Lm  = 8.80 m         Lbb = 138.70 m
  LM  = 2.22 m
------------------------------------------------------------------------------
```

CORMIX SESSION REPORT - continued

```
NON-DIMENSIONAL PARAMETERS:
  Densimetric Froude number       FR0    = 11.26 (based on LQ)
  Channel densimetric Froude no.  FRCH   = 18.09 (based on H0)
  Velocity ratio                  R      = 44.68
-------------------------------------------------------------------------------
MIXING ZONE / TOXIC DILUTION ZONE / AREA OF INTEREST PARAMETERS:
  Toxic discharge                        = no
  Water quality standard specified       = yes
  Water quality standard          CSTD   = 7.2 deg.C
  Regulatory mixing zone                 = no
  Region of interest                     = 3440 m downstream
*******************************************************************************
HYDRODYNAMIC CLASSIFICATION:
  *-----------------------*
  | FLOW CLASS   = FJ1 |
  *-----------------------*
*******************************************************************************
MIXING ZONE EVALUATION (hydrodynamic and regulatory summary):

-------------------------------------------------------------------------------
X-Y-Z Coordinate system:
Origin is located at water surface and at centerline of discharge channel:
    0 m from the left bank/shore.
  Number of display steps NSTEP = 50 per module.
-------------------------------------------------------------------------------
NEAR-FIELD REGION (NFR) CONDITIONS :
Note: The NFR is the zone of strong initial mixing.  It has no regulatory
  implication.  However, this information may be useful for the discharge
  designer because the mixing in the NFR is usually sensitive to the
  discharge design conditions.
  Pollutant concentration at NFR edge  c = 0.9729 deg.C
  Dilution at edge of NFR              s = 25.2
  NFR Location:                        x = 35.51 m
    (centerline coordinates)           y = -101.80 m
                                       z = 0 m
  NFR plume dimensions:  half-width (bh) = 68.36 m
                         thickness (bv) = 0.46 m
Cumulative travel time:      1109.8555 sec.
-------------------------------------------------------------------------------
Buoyancy assessment:
  The effluent density is less than the surrounding ambient water
  density at the discharge level.
  Therefore, the effluent is POSITIVELY BUOYANT and will tend to rise towards
  the surface.
-------------------------------------------------------------------------------
FAR-FIELD MIXING SUMMARY:
  Plume becomes laterally fully mixed at 40.78 m downstream.
-------------------------------------------------------------------------------
PLUME BANK CONTACT SUMMARY:
  Plume in bounded section contacts nearest bank at 35.51 m downstream.
  Plume contacts second bank at 40.78 m downstream.
************************ TOXIC DILUTION ZONE SUMMARY ************************
No TDZ was specified for this simulation.
```

CORMIX SESSION REPORT - continued

********** REGULATORY MIXING ZONE SUMMARY **********
No RMZ has been specified.
However:
The ambient water quality standard was encountered at the following
plume position:

Water quality standard		**= 7.2 deg.C**
Corresponding dilution	**s**	**= 3.4**
Plume location:	**x**	**= 0.15 m**
(centerline coordinates)	**y**	**= -3.80 m**
	z	**= 0 m**
Plume dimensions: **half-width (bh)**		**= 0.99 m**
thickness (bv)		**= 0.36 m**

********** FINAL DESIGN ADVICE AND COMMENTS **********
REMINDER: The user must take note that HYDRODYNAMIC MODELING by any known technique is NOT AN EXACT SCIENCE.
Extensive comparison with field and laboratory data has shown that the CORMIX predictions on dilutions and concentrations (with associated plume geometries) are reliable for the majority of cases and are accurate to within about +-50% (standard deviation).
As a further safeguard, CORMIX will not give predictions whenever it judges the design configuration as highly complex and uncertain for prediction.

KPDES

KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT

PERMIT NO.: KY0001643
AI NO.: 28

AUTHORIZATION TO DISCHARGE UNDER THE KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

Pursuant to Authority in KRS 224,

Rare Breed Distilling LLC
1525 Tyrone Road
Lawrenceburg, Kentucky 40342

is authorized to discharge from a facility located at

Rare Breed Distilling LLC, dba Wild Turkey Distillery
1525 Tyrone Road
Lawrenceburg, Kentucky 42086

to receiving waters named

Outfalls 001 and 002 discharge to the Kentucky River
Outfall 003 discharges to a sinkhole.
Outfall 004 discharges to a highway drainage ditch

in accordance with effluent limitations, monitoring requirements, and other conditions set forth in PARTS I, II, III, IV, and V hereof. The permit consists of this cover sheet, and PART I 6 pages, PART II 1 page, PART III 2 pages, and PART IV 3 pages.

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight,

Date Signed

Sandra L. Gruzesky, Director
Division of Water

A1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the term of this permit, the permittee is authorized to discharge from Outfall serial number: Outfall 001 - No treatment of non-contact cooling water and stormwater. After startup of new cooling tower, non-contact cooling water will no longer be discharged through Outfall 001.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (lbs/day)		Other Units (Specify)		MONITORING REQUIREMENTS	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Measurement Frequency	Sample Type
Flow (MGD)						
Tier 1	Report	Report	N/A	N/A	1/Month	Instantaneous
Tier 2	Report	Report	N/A	N/A	1/Quarter	Instantaneous
Temperature ^{o}F						
Tier 1	N/A	N/A	95	100	1/Month	Grab
Tier 2	N/A	N/A	Removing from Permit			
Total Recoverable Iron	N/A	N/A	Removing from Permit			
Total Recoverable Manganese	N/A	N/A	Removing from Permit			
Total Suspended Solids						
Tier 1	N/A	N/A	30	45	1/Quarter	Grab
Tier 2	N/A	N/A	Report	Report	1/Quarter	Grab
Oil & Grease	N/A	N/A	Report	Report	1/Quarter	Grab

The pH of the effluent shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored 1/Month by grab sample (Tier 1). After addition of the new cooling tower, pH shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored 1/Quarter by grab sample (Tier 2).

There shall be no discharge of floating solids or sheen in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: nearest accessible point after final treatment, but prior to actual discharge or maixing with receiving waters.

Tier 1 – Limits are for current operation without addition of the new cooling tower.
Tier 2 - Limits are for current operation plus the addition of the new cooling tower.
The abbreviation N/A means Not Applicable.

A2. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the term of this permit, the permittee is authorized to discharge from Outfall serial number: Outfall 002 - Process and sanitary wastewaters are treated in a buffering pond and activated sludge treatment pond before flowing to the clarifiers, through a filtration system, and UV sterilization. After startup of new cooling tower, cooling tower blowdown, ESP discharge, and boiler blowdown will also be discharged through Outfall 002.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (lbs/day)		DISCHARGE LIMITATIONS Other Units (Specify)		MONITORING REQUIREMENTS	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Measurement Frequency	Sample Type
Flow (MGD)	N/A	N/A	Report	Report	1/Week	Instantaneous
BOD_5			30(mg/l)*	45(mg/l)*	1/Week	24 Hr. Composite
@ < 110 ton/day	29.4	71.5			1/Week	24 Hr. Composite
@ 110-130 ton/day	34.5	84.3			1/Week	24 Hr. Composite
@ 131-145 ton/day	38.5	93.9			1/Week	24 Hr. Composite
Total Suspended Solids			30(mg/l)*	45(mg/l)*	1/Week	24 Hr. Composite
@ < 110 ton/day	36.0	89.1			1/Week	24 Hr. Composite
@ 110-130 ton/day	42.4	105.1			1/Week	24 Hr. Composite
@ 131-145 ton/day	47.2	117.1			1/Week	24 Hr. Composite
Fecal Coliform Bacteria (N/100 ml)	N/A	N/A	Removing from Permit			
Escherichia Coli (N/100 ml)	N/A	N/A	130	240	1/Month	Grab
Total Residual Chlorine (mg/l)	N/A	N/A	Removing from Permit			
Ammonia Nitrogen (mg/l)	N/A	N/A	20	30	1/Month	Composite
Dissolved Oxygen shall not be less than 2.0 mg/l					1/Month	Grab
Temperature °F						
Tier 1	N/A	N/A	N/A	N/A		
Tier 2	N/A	N/A	N/A	89	1/Month	Grab

Oil & Grease (mg/l)	N/A	N/A	Report	Report	1/Month	Grab

A2. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - continued

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (lbs/day)		DISCHARGE LIMITATIONS Other Units (Specify)		MONITORING REQUIREMENTS	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Measurement Frequency	Sample Type
Total Nitrogen (mg/l)	N/A	N/A	Report	Report	1/Month	Grab
Total Phosphorus (mg/l)	N/A	N/A	Report	Report	1/Month	Grab

The pH of the effluent shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored 1/Month by grab sample.

There shall be no discharge of floating solids or sheen in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: nearest accessible point after final treatment, but prior to actual discharge or maixing with receiving waters.

Tier 1 – Limits are for current operation without addition of the new cooling tower.
Tier 2 - Limits are for current operation plus the addition of the new cooling tower.

The abbreviation BOD_5 means Biochemical Oxygen Demand (5-day).
The effluent limitations for *Escherichia Coli* are 30 day and 7 day Geometric Means.
The abbreviation N/A means Not Applicable.

The loading limits for BOD5 and Total Suspended Solids vary based on tons of grain processed per day.

*Apply only when sanitary wastewater makes up 100% of discharge.

A3. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the term of this permit, the permittee is authorized to discharge from Outfall serial number: Outfall 003 – No treatment of stormwater runoff.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (lbs/day)		Other Units (Specify)		MONITORING REQUIREMENTS	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Measurement Frequency	Sample Type
Flow (MGD)	N/A	N/A	Report	Report	1/Quarter	Instantaneous
BOD_5 (mg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Suspended Solids (mg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Oil & Grease (mg/l)	N/A	N/A	Report	Report	1/Quarter	Grab

The pH of the effluent shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored 1/Quarter by grab sample.

The abbreviation BOD_5 means Biochemical Oxygen Demand (5-day).
The abbreviation N/A means Not Applicable.

There shall be no discharge of floating solids or sheen in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: nearest accessible point after final treatment, but prior to actual discharge or maixing with receiving waters.

A4. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the term of this permit, the permittee is authorized to discharge from Outfall serial number: Outfall 004 – No treatment of stormwater runoff.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (lbs/day)		DISCHARGE LIMITATIONS Other Units (Specify)		MONITORING REQUIREMENTS	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Measurement Frequency	Sample Type
Flow (MGD)	N/A	N/A	Report	Report	1/Quarter	Instantaneous
Total Suspended Solids (mg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Oil & Grease (mg/l)	N/A	N/A	Report	Report	1/Quarter	Grab

The pH of the effluent shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored 1/Quarter by grab sample.

The abbreviation N/A means Not Applicable.

There shall be no discharge of floating solids or sheen in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: nearest accessible point after final treatment, but prior to actual discharge or maixing with receiving waters.

B. Schedule of Compliance

Permittee shall comply with the effluent limitations by the effective date of the permit.

STANDARD CONDITIONS FOR KPDES PERMIT

This permit has been issued under the provisions of KRS Chapter 224 and regulations promulgated pursuant thereto. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits or licenses required by this Cabinet and other state, federal, and local agencies.

It is the responsibility of the permittee to demonstrate compliance with permit parameter limitations by utilization of sufficiently sensitive analytical methods.

The permittee is also advised that all KPDES permit conditions in KPDES Regulation 401 KAR 5:065, Section 1 will apply to all discharges authorized by this permit.

PART III

OTHER REQUIREMENTS

A. Reporting of Monitoring Results

Monitoring results obtained during each monitoring period must be reported on a preprinted Discharge Monitoring Report (DMR) Form that will be mailed to you. The completed DMR for each monitoring period must be sent to the Division of Water at the address listed below (with a copy to the appropriate Regional Office) postmarked no later than the 28th day of the month following the monitoring period for which monitoring results were obtained.

Division of Water
Frankfort Regional Office
643 Teton Trail, Suite B
Frankfort, Kentucky 40601
ATTN: Supervisor

Energy & Environment Cabinet
Dept. for Environmental Protection
Division of Water/SWP Branch
200 Fair Oaks Lane
Frankfort, Kentucky 40601

B. Reopener Clause

This permit shall be modified, or alternatively revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under 401 KAR 5:050 through 5:086, if the effluent standard or limitation so issued or approved:

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

2. Controls any pollutant not limited in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of KRS Chapter 224 when applicable.

C. Cooling Water Additives, FIFRA, and Mollusk Control

The discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) in cooling water which ultimately may be released to the waters of the Commonwealth is prohibited, except Herbicides, unless specifically identified and authorized by the KPDES permit. In the event the permittee needs to use a biocide or chemical not previously reported for mollusk control or other purpose, the permittee shall submit sufficient information, a minimum of thirty (30) days prior to the commencement of use of said biocides or chemicals, to the Division of Water for review and establishment of appropriate control parameters. Such information requirements shall include:

1. Name and general composition of biocide or chemical,
2. Any and all aquatic organism toxicity data,
3. Quantities to be used,
4. Frequencies of use,
5. Proposed discharge concentrations, and
6. EPA registration number, if applicable.

D Mixing Zone

The assigned mixing zone for Temperature at Outfall 001 shall have the following dimensions:

Linear Distance from Point of Discharge:	0.49 feet in any direction
Maximum Surface Area Involved:	0.19 square feet
Volume of Receiving Water	3.24 cfs (2.09 MGD)

PART IV

BEST MANAGEMENT PRACTICES

SECTION A. GENERAL CONDITIONS

1. Applicability

These conditions apply to all permittees who use, manufacture, store, handle, or discharge any pollutant listed as: (1) toxic under Section 307(a)(1) of the Clean Water Act; (2) oil, as defined in Section 311(a)(1) of the Act; (3) any pollutant listed as hazardous under Section 311 of the Act; or (4) is defined as a pollutant pursuant to KRS 224.01-010(35) and who have ancillary manufacturing operations which could result in (1) the release of a hazardous substance, pollutant, or contaminant, or (2) an environmental emergency, as defined in KRS 224.01-400, as amended, or any regulation promulgated pursuant thereto (hereinafter, the "BMP pollutants"). These operations include material storage areas; plant site runoff; in-plant transfer, process and material handling areas; loading and unloading operations, and sludge and waste disposal areas.

2. BMP Plan

The permittee shall develop and implement a Best Management Practices (BMP) plan consistent with 401 KAR 5:065, Section 2(10) pursuant to KRS 224.70-110, which prevents or minimizes the potential for the release of "BMP pollutants" from ancillary activities through plant site runoff; spillage or leaks, sludge or waste disposal; or drainage from raw material storage. A Best Management Practices (BMP) plan will be prepared by the permittee unless the permittee can demonstrate through the submission of a BMP outline that the elements and intent of the BMP have been fulfilled through the use of existing plans such as the Spill Prevention Control and Countermeasure (SPCC) plans, contingency plans, and other applicable documents.

3. Implementation

If this is the first time for the BMP requirement, then the plan shall be developed and submitted to the Division of Water within 90 days of the effective date of the permit. Implementation shall be within 180 days of that submission. For permit renewals the plan in effect at the time of permit reissuance shall remain in effect. Modifications to the plan as a result of ineffectiveness or plan changes to the facility shall be submitted to the Division of Water and implemented as soon as possible.

4. General Requirements

The BMP plan shall:

a. Be documented in narrative form, and shall include any necessary plot plans, drawings, or maps.

b. Establish specific objectives for the control of toxic and hazardous pollutants.

   (1) Each facility component or system shall be examined for its potential for causing a release of "BMP pollutants" due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.

(2) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g., precipitation), or other circumstances which could result in a release of "BMP pollutants," the plan should include a prediction of the direction, rate of flow, and total quantity of the pollutants which could be released from the facility as result of each condition or circumstance.

c. Establish specific Best Management Practices to meet the objectives identified under paragraph b of this section, addressing each component or system capable of causing a release of "BMP pollutants."

d. Include any special conditions established in part b of this section.

e. Be reviewed by plant engineering staff and the plant manager.

5. Specific Requirements

The plan shall be consistent with the general guidance contained in the publication entitled "NPDES Best Management Practices Guidance Document," and shall include the following baseline BMPs as a minimum.

a. BMP Committee
b. Reporting of BMP Incidents
c. Risk Identification and Assessment
d. Employee Training
e. Inspections and Records
f. Preventive Maintenance
g. Good Housekeeping
h. Materials Compatibility
i. Security
j. Materials Inventory

6. SPCC Plans

The BMP plan may reflect requirements for Spill Prevention Control and Countermeasure (SPCC) plans under Section 311 of the Act and 40 CFR Part 151, and may incorporate any part of such plans into the BMP plan by reference.

7. Hazardous Waste Management

The permittee shall assure the proper management of solid and hazardous waste in accordance with the regulations promulgated under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1978 (RCRA) (40 U.S.C. 6901 et seq.) Management practices required under RCRA regulations shall be referenced in the BMP plan.

8. Documentation

The permittee shall maintain a description of the BMP plan at the facility and shall make the plan available upon request to EPPC personnel. Initial copies and modifications thereof shall be sent to the following addresses when required by Section 3:

Division of Water
Frankfort Regional Office
643 Teton Trail, Suite B
Frankfort, Kentucky 40601
ATTN: Supervisor

Energy & Environment Cabinet
Dept. for Environmental Protection
Division of Water/SWP Branch
200 Fair Oaks Lane
Frankfort, Kentucky 40601

9. BMP Plan Modification

The permittee shall amend the BMP plan whenever there is a change in the facility or change in the operation of the facility which materially increases the potential for the ancillary activities to result in the release of "BMP pollutants."

10. Modification for Ineffectiveness

If the BMP plan proves to be ineffective in achieving the general objective of preventing the release of "BMP pollutants," then the specific objectives and requirements under paragraphs b and c of Section 4, the permit, and/or the BMP plan shall be subject to modification to incorporate revised BMP requirements. If at any time following the issuance of this permit the BMP plan is found to be inadequate pursuant to a state or federal site inspection or plan review, the plan shall be modified to incorporate such changes necessary to resolve the concerns.

SECTION B. SPECIFIC CONDITIONS

Periodically Discharged Wastewaters Not Specifically Covered By Effluent Conditions
The permittee shall include in this BMP plan procedures and controls necessary for the handling of periodically discharged wastewaters such as intake screen backwash, meter calibration, fire protection, hydrostatic testing water, water associated with demolition projects, etc.